Quality of Life and Its Associated Factors among People with Epilepsy

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Abstract

Epilepsy is defined as a brain disorder characterized by an enduring predisposition to generate epileptic seizures by its neurobiological, cognitive, psychological, and social consequences. Many factors affect the quality of life of people with epilepsy, including Seizures Severity, Memory, Medications effects. World Health Organization (WHO), estimated that there are 50 million people with epilepsy worldwide. Stable People with epilepsy are those who were suffered from disease for more than three year as diagnosed by clinical neurologist. The study was conducted in neurology OPD DMC Ludhiana. Findings reveals that 68% of people with epilepsy had average quality of life. The mean percentage score was found highest for the social function domain i.e.43.77±10.6301 and was found lowest for seizure worry domain i.e.11.82±7.40. Age of onset seizures (p=0.367), frequency of seizures (p=0.552) were associated with epilepsy among people with epilepsy.

Keywords: *Quality of life, Epilepsy, Seizures, Neurology OPD.*

Introduction

Epilepsy is a brain disorder characterized by an enduring predisposition to generate epileptic seizures. Seizures are caused by uncontrolled neuronal electrical activity of groups of cerebral neurons.1 According to the World Health Organization (WHO), there are 50 million people with epilepsy worldwide; with a prevalence rate of 3.0-11.9/ 1,000 people in India.2 Epilepsy can be associated with profound physical, psychological and social, emotional consequences and its impact on a person's quality of life (QOL) can be greater than that of many other chronic diseases.3 They experience these effects in their work, driving, social and general activities in their daily life.4 Also, there are many misconceptions that surrounds epilepsy, such as being incurable, hereditary or a consequence of divine punishment for bad deeds, it greatly affects the psychosocial health.5 So, several studies have reported that depression and anxiety, marriage, increased age, low income and duration of disease and seizure frequency are associated with poor quality of life.6 Moreover, there are very less studies in India, which shows the associated factors of quality of life among people with epilepsy.7 So, the researcher felt that there is a strong need to assess the quality of life and its associated factors of people with epilepsy.

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Material and Methods

The objectives of the study were to assess the quality of life and its associated factors among people with epilepsy in a tertiary care hospital. The descriptive (exploratory) research design was used and 100 people with epilepsy attending neurology OPD of Dayanand medical college & Hospital were selected by purposive sampling technique. The tool used for study consists into three sections. Section I: Part A: Socio-demographic profile: Part B: Clinical profile were prepared by author:

Section II: QOLIE-31 (1993) to assess the quality of life among people with epilepsy[8] and Section III: Structured checklist to explore the associated factors of quality of life among people with epilepsy. The checklist has 27 different types of associated factors of quality of life among people with epilepsy. Socio-demographic profile, clinical profile and structured checklist were found to be valid by different experts and QOLIE-31 was a standardized tool. The written permission was taken from joycee cramer for used the tool. The reliability of QOLI-31 tool is pre-determined by test-retest method by using karl pearson coefficient of correlation and was found to be 0.97 and the reliability of structured checklist to explore the associated factors of quality of life was determined by test-retest method by using karl pearson coefficient of correlation and was found to be 0.98. Data was collected in the month of January (21-.01-2018) and February (11-02-2018). The written informed consent was obtained from the subjects. The study was approved by research and ethical committee of DMC and Hospital, Ludhiana. The subjects were explained the objectives and activities of research projects were given to them and they were assured that their responses would be kept confidential by providing information sheet

Results

Table No: 1 Distribution people with epilepsy as per socio-demographic profile

N=100

Socio-Demographic Profile	f (%)
Age in years*	
≤30	37
31-40	30
41-50	21
>50	12
Gender	
Male	61
Female	39
Marital status	
Unmarried	37
Married	59
Divorce/widowed	04
Religion	
Hindu	37
Sikh	47
Christian	10
Muslim	06
Educational status	
Illiterate	08
Elementary	37
Secondary/Senior secondary	33
Graduate & above	22
Employment status	
Working**	46
Non-Working	54
Monthly family income in rupees	
≤5000	10
5001-10,000	51

** Mean age ± SD = [34.37 ± 10.86]*

*** [Shopkeeper: 08 (17.39), Service: 17 (36.95), Businessmen: 05 (10.86), Farmer: 10 (21.73), Labourer: 06 (13.04)]*

Table No: 1 depicts that the socio-demographic profile of people with epilepsy. More than 1/3rd people with epilepsy (37%) were in age group of ≤ 30 years. In case of gender, out of 100 people 61% people with epilepsy were males. Marital status of the people with epilepsy indicates that more than half (59%) subjects were married and less than half (47%) people belonged to Sikh religion. More than 1/4th people with epilepsy i.e. (37%) were educated up to elementary level, (46%) were working. More than half of people (51%) were having monthly family income Rs. 5,000-10,000.

Table no: 2 Distribution of people with epilepsy as per personal habits N=100

Socio-Demographic Profile	f (%)
History of Smoking	
Yes	28
No	72
Type of smoking (n=28)	13 (44.8)
Biddi	12 (41.4)
Cigarette	03 (10.3)
Hukka	
Duration of smoking (n=28)	
1-5	10 (35.5)
5-10	14 (48.3)
10-15	04 (13.8)
History of alcohol	
Yes	41
No	59
Type of alcohol (n=41)	
Whisky	12 (29.3)
Rum	10 (24.4)
Vodka	02 (4.9)
Beer	11 (26.8)
Desi	06 (14.6)
Duration of alcoholion (n=41)	
1-5	12 (29.3)

Table no: 2 it was depicted that majority of (72%) of people with epilepsy were non smokers among them, 13(44.8%) subjects were using biddi. It was also revealed that 14(48.3%) subjects were smoking 5-10 years. Less than half 41% of people with epilepsy were consuming alcohol among them, 59% of the subjects 12(29.3%) were consuming whisky. Less than 1/3rd of 23(56.1%) people with epilepsy were consuming alcohol from 5-10 years.

Table No: 3 Distribution of people with epilepsy as per their clinical profile

N=100

Clinical Profile	f (%)
Age of onset of seizures in years	
≤10	19
11-20	45
21-30	26
31-40	10
Family history of epilepsy*	
Yes	19
No	81
Duration of the illness in years	
≤10	16
11-15	52
16-20	22
>20	10
Duration of treatment	
≤10	16
11-15	52
16-20	22
>20	10
History of Hospitalization	
Yes	18
No	19

* Cousin Sister 5(26.31%), Cousin Brother 7 (36.84%), Father 3 (15.78%), Uncle 4(22.05%)

Table No: 3 it reveals that the distribution of people with epilepsy as per their clinical profile. Less than half i.e. 45% people with epilepsy were had onset of seizures between 11-20 years. Majority of people, (81%) had no family history. More than half (52%) had duration of illness from 11-15 years and more than half 52% were taking treatment since 11-15 years. Majority of (81%) people with epilepsy had past history of hospitalization and remaining 19% had no past history of hospitalization due to seizure.

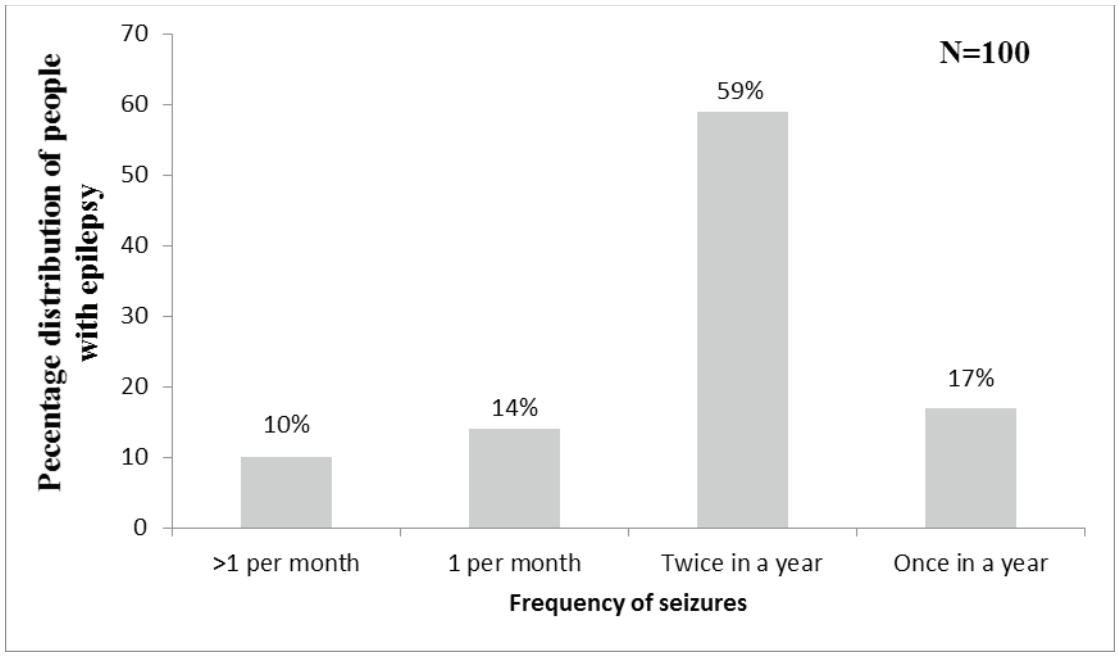
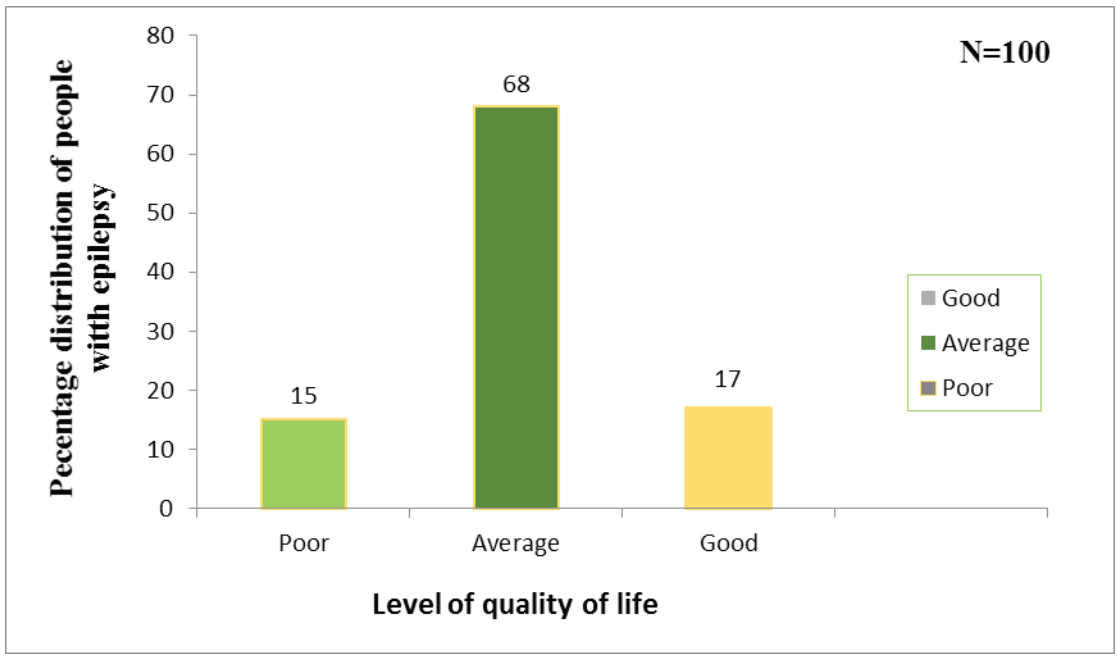


Figure no 1: Distribution of people with epilepsy as per their frequency of seizures.

Figure no 1: depicts that more than half 59% people with epilepsy were having frequency of seizures from Twice in a year followed by 17% people with epilepsy were having frequency of seizures from once in a year, 10 % people with epilepsy were having frequency of seizures from >1 per month and 14% people with epilepsy who were having frequency of seizures 1 per month.



Maximum Score = 290 ***Mean ± SD*** = 253.15±36.52 ***Minimum Score*** = 00

Figure no: 2 Distribution of people with epilepsy as per quality of life

Figure no.5 depicts that 68% of people with epilepsy had average quality of life where as 17% had good quality of life and 15% of people with epilepsy had poor quality of life.

Table no: 4 Mean score of quality of life domain among people with epilepsy

N=100

QOL Domains	Max. Score	Mean ± SD	Mean %	Rank
Seizure worry	100	11.82±7.40	11.78	7
Overall quality of life	100	35.43±13.01	35.34	6
Emotional well being	100	42.96±6.93	43.0	3
Energy fatigue	100	43.15±7.83	43.2	2
Cognitive	100	37.23±8.31	37.2	5
Medication effects	100	38.80±14.54	38.78	4
Social function	100	43.77±10.63	43.78	1

*Mean±SD= 48.2±6.0 *Higher the score better quality of life*

Table no: 4 showed that the mean percentage score was found highest for the social function domain i.e. 43.78 with mean score 43.77±10.63 and was found lowest for seizure worry domain i.e. 11.78 and mean score 11.82±7.40.

Table no: 5 Association of quality of life among people with epilepsy with socio-demographic profile

N=100

Socio-demographic profile	n	Mean ± SD	F/t Value	P value
Age in years				
≤30	37	167.01 ± 20.96	0.577	0.680^{NS}
31-40	30	160.08 ± 24.06		
41-50	21	159.37 ± 26.81		
>50	12	170.30 ± 24.22		
Gender				
Male	61	158.40 ± 25.21	1.323	0.189^{NS}
Female	39	165.03 ± 23.29		
Marital status				
Unmarried	37	158.23 ± 22.47	0.519	0.670^{NS}
Married	59	162.71 ± 22.38		
Divorce/widowed	04	152.98 ± 47.94		

Cont... **Table no: 5 Association of quality of life among people with epilepsy with socio-demographic profile**

N=100

Socio-demographic profile	n	Mean ± SD	F/t Value	P value
History of smoking				
Yes	28	166.68±23.04	1.455	0.149NS
No	72	158.77±24.95		
History of Alcoholism				
Yes	41	164.52 ± 23.92	1.203	0.232NS
No	59	158.52 ± 24.92		

Maximum score =290 NS=Non-significant (p>0.05)

Minimum score= 00

Table No: 5 it was depicted that the mean quality of life score was found highest 170.30±24.22 among people with epilepsy were in age group of >50 years, followed by 167.01±20.96, 160.08±24.06 and 159.37 ± 26.81 among subjects of age group ≤30, 31-40 and 41-50 years had no impact the quality of life with epilepsy. In case of gender the mean quality of life score was found highest in female 165.03±23.29 than males. The mean quality of life score was found highest 162.71±22.38 subjects who were married followed by 158.23 ± 22.47, 152.98 ± 47.94 were unmarried and divorce/widow. The mean quality of life of domains of people with history of alcohol was found highest in 166.68±23.04 subjects who were smoking and 164.52 ± 23.92 subjects who were consuming alcohol and it was found to be statistically non-significant.

Table No 6: Association of with quality of life among people with epilepsy clinical profile N=100

Clinical profile	N	Mean ± SD	F/t Value	P value
Age of onset of seizures in years				
≤10	06	155.94 ± 24.33	1.067	0.367^{NS}
11-20	45	156.95 ± 22.53		
21-30	26	163.75 ± 26.95		
31-40	23	167.05 ± 25.57		
Family history of epilepsy				
Yes	19	166.20 ± 24.69	1.029	0.306^{NS}
No	81	159.76 ± 24.54		
Duration of the illness in years				
≤10	16	161.90 ± 20.91	0.601	0.663^{NS}
11-15	52	165.18 ± 27.16		
16-20	22	155.23 ± 21.63		
>20	10	159.67 ± 22.42		
Frequency of seizures				
>1 per month	10	167.48 ± 20.91	0.704	0.552^{NS}
1 per month	14	161.57 ± 29.38		
Twice in a year	59	158.29 ± 24.69		
Once in a year	17	165.10 ± 23.55		

Clinical profile	N	Mean ± SD	F/t Value	P value
Duration of treatment				
≤10	16	161.90 ± 20.91	0.601	0.663NS
11-15	52	165.18 ± 27.16		
16-20	22	155.23 ± 21.63		
>20	10	159.67 ± 22.42		

Maximum score =289 NS=Non-Significant (p>0.05)

Minimum score= 00

Table No: 6 depicts that the mean score of quality of life was found highest 167.05 ± 25.57 among people with epilepsy were age for onset of seizures between i.e. 31-40 years followed by 31-40 years followed by 163.75, 156.95,155.94 among people were onset of seizure 21-40, 11-20 and ≤10 years. The mean quality of life score was (166.20± 24.69) among people with epilepsy who had family history of epilepsy, followed by 159.76± 24.54 among those people who had no family history and it was found to be statistically non-significant.

Association of the mean quality of life score was found highest 165.18±27.16 subjects who were duration of illness and duration of treatment 11-15 years followed by followed by 161.90, 159.67, 155.23 among people with epilepsy who duration of illness from ≤10, >20 and 16-20 years. As per frequency of seizures the mean quality of life score was found highest 167.48±20.91 among people with epilepsy were frequency of seizures from >1 per month, followed by 165.10, 161.57 and 158.29 among people were frequency of seizures from once in a year, 1 per month and twice in a year and it was found to be statistically non-significant.

Discussion

The analysis of socio-demographic profile of people with epilepsy revealed that more than 1/3rd people with epilepsy 37 were in age group of ≤ 30 years and 61% people were males. In case of marital status 59% subjects were married and less than half 47% people with epilepsy belonged to Sikh. More than 1/3rd people with epilepsy i.e. 37% were educated up to elementary level. 54% were non working and more than half of people with epilepsy 51% were having monthly family income Rs. 5,000-10,000. Almost Similar findings were reported by Aggrawal Rishika, Nijhawan Madhu (2010) et al. who conducted the study among 70 people with epilepsy in a northern Indian teaching hospital and reported 38% were aged group 18-28 years, 42% people with epilepsy males and most of the subjects 51% were married. 54% subjects belonged to Hindu religion and 17% subjects were studied in a middle school. Most of 22% subjects were working in agriculture.[9]

Analysis revealed that maximum 65% of people with epilepsy were having average quality of life followed by 17% were having good quality of life and 15% who were having poor quality of life. In terms of various domains i.e. seizure worry, overall quality of life, emotional well being, energy/fatigue, cognitive, medication effects and social function. In the present study represents that people with epilepsy the mean score was highest 43.77±10.63 for the social function domain and was lowest 11.82±7.041 for seizure worry domain. So, the people with epilepsy had good quality of life for social domain and poor quality of life for seizure worry domain. Similar study conducted by Sahar Us Nazam, Chaudary Rashid Haroon (2010). Who depicted that the mean score was highest 64.61±8.97 emotional well being domain and lowest was 51.55±16.06 for seizure worry domain.[10] Analysis of associated factors revealed that majority of 96% people with epilepsy feels lack of sleep/sleeplessness and 98% of people with epilepsy had altered consciousness during seizures. It depicts that 100% people with epilepsy had fear having seizures and in terms of medication effects 98% people with epilepsy had feel taking medication. Maximum number of 92% had adequate support group i.e. (family/friends) and 82% subjects feels that we were financial burden for family members. The results of present study reveals that there is no relationship found between the quality of life among people with epilepsy with their age, gender, marital status, , history of smoking, history of alcohol, age of onset of seizures, family history, duration of illness, frequency of seizures, duration of treatment and it was found to be non-significant at (p>0.05).

Conclusion

The study showed that people with epilepsy had average quality of life. On the other aspect, Majority of people with epilepsy had good quality of life for social domain and poor quality of life for seizure worry domain. Associated factors i.e. sleeplessness, speaking, understanding, medication burden, memory, self esteem and financial burden was impact the quality of life of people with epilepsy. Association with age, gender, marital status, religion, educational status and employment status, history of smoking and history of alcohol, age at onset of seizures, family history, duration of illness, frequency of seizures, name of drug, duration of treatment and history of hospitalized was found to be non-significant. So, it had no impact the quality of life. Psychological support also plays an important role is improving quality of life of people with epilepsy. Therefore, it was recommended that informational and educational material in the form of booklet is very important to improve quality of life.

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Conflict of Interest: Nil

Ethical Clearance: A written permission of conducting the study will be taken from Institutional ethical committee, Research Development cell of Dayanand Medical College and Hospital, Ludhiana.

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